

APPLICANT(S): Rosenberg, et al.
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In the Claims:

Please amend the following claims to read as follows:

1-91. Cancelled.

92. (New) An isolated nucleic acid molecule comprising a nucleic acid sequence consisting of nucleotides 323 to 1255 of SEQ ID NO: 1, wherein said nucleic acid sequence encodes a polypeptide having 3-O-sulfotransferase activity.

93. (New) The isolated nucleic acid molecule of claim 92, wherein said nucleic acid sequence encodes a polypeptide comprising amino acid residues 53-311 or 21-307 of SEQ ID NO: 2, and wherein said polypeptide has 3-O-sulfotransferase activity.

94. (New) An isolated nucleic acid molecule, wherein said nucleic acid molecule comprises the nucleotide sequence in SEQ ID NO: 1.

95. (New) An isolated nucleic acid molecule, comprising a nucleic acid sequence that has at least 90 % nucleotide sequence identity with nucleotides 323-1255 of SEQ ID NO: 1, wherein said nucleic acid sequence encodes a polypeptide having 3-O-sulfotransferase activity.

96. (New) An isolated nucleic acid molecule, wherein said nucleic acid molecule comprises the nucleotide sequence of SEQ ID NO: 3, and wherein said nucleic acid molecule encodes a polypeptide having 3-O-sulfotransferase activity.

97. (New) An isolated nucleic acid molecule comprising a nucleic acid sequence encoding a polypeptide comprising the amino acid sequence set forth in SEQ ID NO: 2, wherein said polypeptide has 3-O-sulfotransferase activity.

98. (New) An isolated nucleic acid molecule comprising a nucleic acid sequence encoding a polypeptide comprising amino acid residues 53-311 of SEQ ID NO: 2, wherein said polypeptide has 3-O-sulfotransferase activity.

99. (New) An isolated nucleic acid molecule, comprising a nucleic acid sequence consisting of nucleotides 119-1039 of SEQ ID NO: 3, wherein said nucleic acid sequence encodes a polypeptide having 3-O-sulfotransferase activity.

100. (New) The isolated nucleic acid of claim 99, wherein said nucleic acid sequence encodes a polypeptide comprising amino acid residues 21-303 or 49-307 of SEQ ID NO: 4, wherein said polypeptide has 3-O-sulfotranferase activity.

101. (New) An isolated nucleic acid molecule, comprising a nucleic acid encoding a polypeptide comprising amino acid residues 49-307 of SEQ ID NO: 4, wherein said polypeptide has 3-O-sulfotransferase activity.

102. (New) An isolated nucleic acid molecule comprising a nucleic acid sequence that has at least 90 % nucleotide sequence identity with nucleotides 119 to 1039 of SEQ ID NO: 3, wherein said nucleic acid sequence encodes a polypeptide having 3-O-sulfotransferase activity.

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103. (New) An isolated nucleic acid molecule comprising a nucleic acid sequence that encodes a polypeptide comprising the amino acid sequence set forth in of SEQ ID NO: 4, wherein said polypeptide has 3-O-sulfotransferase activity.

104. (New) An isolated host cell comprising a nucleic acid of claims 92, 95, 98, 99, 100 or 103.

105. (New) The isolated host cell of claim 104, wherein said host cell is selected from the group consisting of bacterial cells, yeast cells and insect cells.

106. (New) The isolated host cell of claim 104, wherein said cell is a mammalian cell.

107. (New) The isolated host cell of claim 104, wherein said cell is selected from the group consisting of COS-7 cells, CHO cells, murine primary cardiac microvascular endothelial cells, murine mast cell line C57.1, human primary endothelial cells of umbilical vein, F9 embryonal carcinoma cells, rat fat pad endothelial cells, and L cells.

108. (New) A vector comprising the isolated nucleic acid of claim 92, 95, 97, 98, 99, 100, 102 or 103.

109. (New) An isolated host cell comprising the vector of claim 108.